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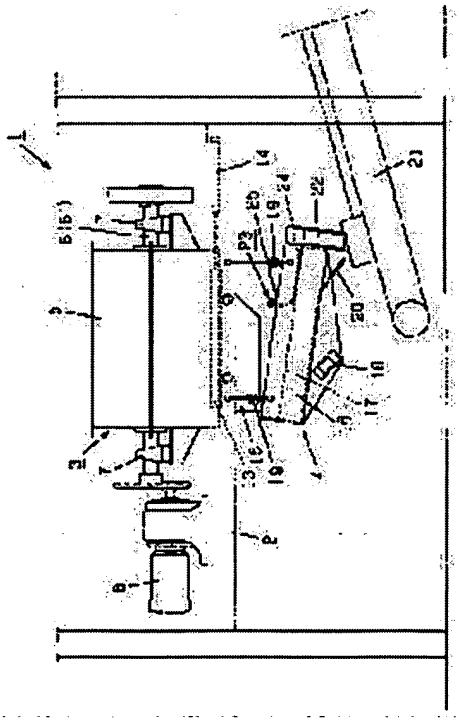
(54) EQUIPMENT FOR BLENDING AND SEPARATING CRUSHED STONE POWDER

(57)Abstract:

PROBLEM TO BE SOLVED: To provide equipment with a simple construction for blending and separating crushed stone powders blending the powerders with a stabilizer, and separating the powders and can manufacture uniformed particulate matter of a precribed grain size.

SOLUTION: The device for blending and sorting the crushed stone fine powder is provided with a blender 3 for blending the crushed stone fine powder with the stabilizer and then granulating the blended matter and a vibrating sieve 4 for screening particulate matter of grain size within prescription below the blender 3. Further one end side of a flexible plate 24 is fixed to a discharging side of the vibrating sieve 4 and a free end of other end side thereof is mounted on a sieve net. A mixture stirred and blended by the blender 3 is sent to the vibrating sieve 4 and is screened. Massive matter which does not pass through meshes is cracked by a blow of the vibrating flexible plate 24 during passing between the flexible plate 24 and the sieve net and passes through the meshes.



CLAIMS

[Claim(s)]
[Claim 1] The mixed selector of the crushed stone impalpable powder characterized by equipping the blowdown side of this vibration screen with a stroke means to add and crack a stroke in the massive object which does not pass a mesh using the oscillation of a vibration screen while having the mixer which mixes and granulates crushed stone impalpable powder and a stabilizer and equipping the low order of this mixer with the vibration screen which sifts out the granular object of the grain size in predetermined.
[Claim 2] The mixed selector of the crushed stone impalpable powder according to claim 1 characterized by considering as the configuration cracked by the stroke of the flexible plate which vibrates while the massive object which fixes the end side of a flexible plate to the blowdown side of a vibration screen, carries the free end by the side of the other end almost on a sieve mesh as said stroke means, and does not pass a mesh passes through between a flexible plate and sieve meshes.

[Translation done.]

* NOTICES *

DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Field of the Invention] This invention performs the wet process which washes a crushed stone in a quarry, a crushed stone field, or a sand production field, it adds calcined lime, a petrifaction system stabilizer, etc. to the crushed stone impalpable powder (dewatering cake) collected from the waste-water-treatment process, carries out churning mixing, granulates, and it relates to the mixed selector of the crushed stone impalpable powder which secures stability while it raises the reinforcement.
[0002]
[Description of the Prior Art] In the quarry, the crushed stone field, or the sand production field, the wet process of washing a crushed stone was carried out, and a lot of crushed stone impalpable powder is generated from the waste-water-treatment process. This crushed stone impalpable powder was the particle of the very fine sandy system of particle size, and for the description [-izing / easily / with storm sewage etc. / description / the shape of mud], it reclaimed land from it as industrial waste, and it was disposed of.
[0003] By the way, as an art of crushed stone impalpable powder which has such description, recently, if carry out amount addition of calcined lime or the lime system stabilizer suitably at crushed stone impalpable powder, and carry out stirring mixing, it **-izes with a mixer, stabilization crushed stone impalpable powder is manufactured and this stabilization crushed stone impalpable powder is mixed with a crusher run (a rock or a ball a crusher a rate under [splendid] crushed stone of an as), or a playback crusher run, it will have become clear that it can use effectively as hydraulic compound subgrade material. And the quality of said granulated stabilization crushed stone impalpable powder is requiring that grain size should suit 95% or more of 5mm screen passage mass percentage.
[0004]
[Problem(s) to be Solved by the Invention] However, when a stabilizer is mixed with crushed stone impalpable powder with a mixer and stabilization crushed stone impalpable powder is manufactured, it is mixed with the granular object of the grain size in predetermined, and a massive object with a big lump -- the thing adhering to a mixing chamber wall is shaved off just before blowdown -- may be discharged. Although this unnecessary massive object will be removed with the screen equipment of degree process etc., when there are many amounts removed, there is a problem that the effective utilization factor of an aggregate resource worsens.
[0005] Let it be a technical problem for this invention to offer the mixed selector of the crushed stone impalpable powder which is an easy equipment configuration, can perform crushed stone impalpable powder, mixing of a stabilizer, and crack sorting in view of the above-mentioned point, and can manufacture many granular objects of the grain size in predetermined as much as possible.
[0006]
[Means for Solving the Problem] If this invention is in the mixed selector of crushed stone impalpable powder according to claim 1 in order to solve the above-mentioned technical problem While having the mixer which mixes and granulates crushed stone impalpable powder and a stabilizer and equipping the

low order of this mixer with the vibration screen which sifts out the granular object of the grain size in predetermined It is characterized by equipping the blowdown side of this vibration screen with a stroke means to add and crack a stroke in the massive object which does not pass a mesh using the oscillation of a vibration screen.
[0007] Moreover, if it is in the mixed selector of crushed stone impalpable powder according to claim 2, as said stroke means, the end side of a flexible plate is fixed to the blowdown side of a vibration screen, the free end by the side of the other end is almost carried on a sieve mesh, and it is characterized by considering as the configuration cracked by the stroke of the flexible plate which vibrates while the massive object which does not pass a mesh passes through between a flexible plate and sieve meshes.
[0008]
[Embodiment of the Invention] According to the mixed selector of the crushed stone impalpable powder of this invention according to claim 1, if amount addition of calcined lime, the lime system stabilizer, etc. is carried out suitably and stirring mixing is carried out within a mixer at crushed stone impalpable powder, crushed stone impalpable powder will be dehydrated by the stabilizer, and if it becomes massive gradually and agitates further, it is cracked by the mixed wing and granulates soon. If mixture is discharged to a low-ranking vibration screen after predetermined time mixing with a mixer, while mixture flows down along with the sieve mesh of a vibration screen, the granular object in a great portion of predetermined grain size passes the mesh of a sieve mesh, and is sorted out. And what the massive object with a large grain size could add the impact, was cracked by stroke means to vibrate with the oscillation of a vibration screen if it flows down without passing a mesh and arrives at the place of a stroke means soon, and was cracked finely passes a mesh, and sorting clearance of a massive object, ****, etc. which fell and remained, without being cracked is carried out as a massive object besides predetermined grain size.
[0009] thus -- while carrying out churning mixing of crushed stone impalpable powder and the stabilizer, and adding a stroke in a vibration screen even if a massive big thing is discharged together, without being cracked well in case granulation processing is carried out -- **** -- many sorting recovery of the granular object in predetermined grain size can be carried out as much as possible by things.
[0010] Moreover, since according to the mixed selector of the crushed stone impalpable powder of this invention according to claim 2 the end side of a flexible plate is fixed to the blowdown side of a vibration screen and the free end by the side of the other end was almost carried on the sieve mesh as a stroke means The flexible plate is moving so that a sieve mesh may be hit by the oscillation of a vibration screen, the massive object which does not pass a sieve mesh is also cracked to some extent by the stroke of a flexible plate, and sorting recovery of it is carried out as a granular object of the grain size in predetermined. It is easy, and the configuration of this stroke means is also cheap, and it is effective.
[of a configuration]
[0011]
[Example] Hereafter, the example of this invention is explained based on a drawing.
[0012] One in drawing is the mixed selector of the crushed stone impalpable powder which adds crushed stone impalpable powder and a stabilizer, mixes, and is granulated, carries the mixer 3 which carries out granulation of the crushed stone impalpable powder on a stand 2, and is arranging in the low order of this mixer 3 the vibration screen 4 which carries out crack sorting. In addition, although not illustrated, storage of crushed stone impalpable powder and a stabilizer, a measuring tub, etc. are suitably arranged in the high order of a mixer 3.
[0013] It supports free [a revolution] by the bearing 7 which penetrated two parallel mixed shafts 6 and 6' to the mixing chamber 5, and was fixed to it as said mixer 3 at the mixing chamber 5, for example, and the tandem-drum-arrangement mixer rotated in the direction of repulsion which shows the mixed shaft 6 and 6' by the arrow head of drawing 2 by the motor 8 for actuation is adopted. While arranging arms 9 and 10 in said mixed shaft 6 and 6' at a radial, the scraping wing 12 which bears the operation which scratches the ingredient which adhered the grinding crushing wing 11 which bears the operation which grinds and crushes a massive object at the head of an arm 10 again at the mixing chamber 5 is arranged at the head of an arm 9.

[0014] Said grinding crushing wing 11 serves as a configuration which bites the massive object which is going to grind against the clearance between the walls of a mixing chamber 5, and it is going to crush, and is strongly forced to a wall. Moreover, the scraping wing 12 While scratching the ingredient which ground, was crushed by the grinding crushing wing 11, and adhered to the wall of a mixing chamber 5 It is the configuration which can send out the scratched ingredient in the mixed shaft 6 and the direction of an axial center of 6', and is made the granular object which can reuse crushed stone impalpable powder by grinding by both this wing and repeating a crushing operation and a scraping operation repeatedly.
[0015] The lower part of a mixing chamber 5 is equipped with the gate 13 which opens and blockades an exhaust port, and this gate 13 is made to slide by the air cylinder 14, is opened and closed optimum dose every, and enables it to discharge mixture gradually. Moreover, the advice hopper 15 which shows the mixture discharged to a vibration screen 4 is arranged in the low order of a mixing chamber 5. In addition, a mixer 3 is not limited to the tandem-drum-arrangement mixer of the above structures, in short, mixes crushed stone impalpable powder and a stabilizer, and just corns them suitably.
[0016] Suitably, a vibration screen 4 made the low order of a mixing chamber 5 incline through installation and a spring 19 in a location, and has hung the vibrating motor 18 in it while it arranges the sieve mesh 17 which has a predetermined mesh in a frame 16. And while making it flow down, vibrating the thrown-in mixture, the granular object which passed the sieve and the mesh is dropped on the conveyance conveyer 21 through the advice chute 20, and are collected, and he is trying to discharge as discard the massive object which does not pass a mesh out of a system through the oversize discharge charge 22. In addition, although the mesh of a sieve mesh 17 should just adopt the thing of proper size if needed, if an about 6mm thing is adopted, for example, a granular object suitable as subgrade material will be obtained.
[0017] Moreover, the stroke means 23 for adding a stroke to the massive object which does not pass a mesh using the oscillation of a vibration screen 4, and cracking finely is arranged in the blowdown side of the sieve mesh 17 of a vibration screen 4. The flexible plates 24, such as a rubber plate suitably made into die length as this stroke means 23 by the sieve mesh 17 as shown, for example in drawing 1 and drawing 3 , and ******, are used, it fixes with a conclusion implement to the supporter material 25 which built the frame 16 over this end side, and the free end by the side of the other end is almost carried on a sieve mesh 17. The thing of weight is employable suitably, or this flexible plate 24 attaches a spring and weight, and enables it to demonstrate proper striking power so that it may vibrate up and down with the oscillation of a vibration screen 4 and the stroke crack of the massive object on a sieve mesh 17 can be carried out. Thus, if the flexible plate 24 is adopted as a stroke means, a configuration is easy and cheap, and although what cannot be cracked [****] is inserted, since it is convenient, it is convenient.
[0018] When carrying out churning mixing of crushed stone impalpable powder and the stabilizer and manufacturing stabilization crushed stone impalpable powder with the mixed selector 1, while carrying out a deer, paying crushed stone impalpable powder out of the crushed stone impalpable powder storage tank which is not illustrated first and carrying out specified quantity measuring in a measuring tub, a stabilizer is paid out of a stabilizer storage tank, what carried out specified quantity measuring and was these-measured in the measuring tub is supplied to a mixing chamber 5, and churning mixing is carried out. If churning mixing of the crushed stone impalpable powder is carried out with a stabilizer, it will become a massive object gradually, dehydrating, and this massive object repeats repeatedly scraping by grinding crushing and the scraping wing 12 which are ground and are twisted crushing wing 11, receives it, is cracked finely, and is granulated soon. If crushed stone impalpable powder is granulated in general, by the air cylinder 14, the gate 13 of the mixing chamber 5 lower part is opened gradually, and is discharged to the optimum dose [every] vibration screen 4.
[0019] While the mixture thrown into the vibration screen 4 flows down with the screen crack by oscillation, most things pass the mesh of a sieve mesh 17, and fall. The massive object which does not pass a mesh flows down on a sieve mesh 17 as it is, and arrives at the place of the stroke means 23.
[0020] If the clearance between the flexible plates 24 and sieve meshes 17 whose massive object is the stroke means 23 is entered, a massive object is hit by the flexible plate 24 danced up and down by

oscillation, and is cracked gradually. In this way, what was cracked while passing the flexible plate 24, and became small [grain size] passes the mesh of a sieve mesh 17, falls, through the advice chute 20, is discharged on the conveyance conveyer 21 and collected. Moreover, **** which remained without being cracked is discharged out of a system as discard through the oversize discharge charge 22 to predetermined grain size.

[0021] Thus, in the mixed selector 1 of the above-mentioned crushed stone impalpable powder, when the mixed crack of crushed stone impalpable powder and the stabilizer is carried out and granulation processing is carried out with a mixer 3, even if a still massive thing is discharged without being cracked well, it cracks with the stroke means 23 with which the vibration screen 4 was equipped, and many granular objects in predetermined grain size can be collected as much as possible.

[0022]

[Effect of the Invention] While having the mixer which mixes and granulates crushed stone impalpable powder and a stabilizer and equipping the low order of this mixer with the vibration screen which sifts out the granular object of the grain size in predetermined according to the mixed selector of the crushed stone impalpable powder of this invention according to claim 1 as mentioned above Since the blowdown side of this vibration screen was equipped with a stroke means to add and crack a stroke in the massive object which does not pass a mesh using the oscillation of a vibration screen, by the easy equipment configuration, crushed stone impalpable powder, mixing of a stabilizer, and crack sorting can be performed, and many granular objects of the grain size in predetermined can be manufactured as much as possible.

[0023] According to the mixed selector of crushed stone impalpable powder according to claim 2, moreover, as a stroke means Since it considered as the configuration cracked by the stroke of the flexible plate which vibrates while the massive object which fixes the end side of a flexible plate to the blowdown side of a vibration screen, carries the free end by the side of the other end almost on a sieve mesh, and does not pass a mesh passes through between a flexible plate and sieve meshes As a stroke means, it is easy, and a configuration is also cheap and effective.

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審査請求　未請求　請求項の数２　ＯＬ　（全 ５ 頁）　最終頁に続く

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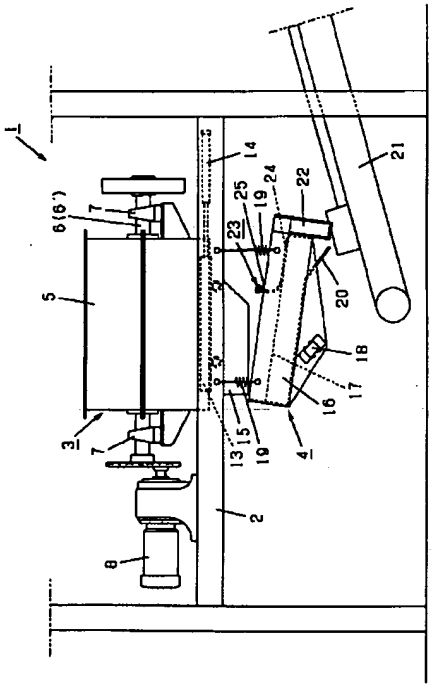
最終頁に続く

(54)【発明の名称】　砕石微粉末の混合選別装置

(57)【要約】
【課題】　簡単な装置構成で、砕石微粉末と安定材の混合と解砕選別とを行えて所定内粒度の粒状物を極力多く製造することのできる砕石微粉末の混合選別装置を提供する。
【解決手段】　砕石微粉末と安定材とを混合して粒状化する混合機３を備え、該混合機３の下位には所定内粒度の粒状物を篩分ける振動篩４を備える。また、振動篩４の排出側に可撓性板材２４の一端側を固着して他端側の自由端を篩網上に載せ掛ける。そして混合機３にて撹拌混合した混合物を振動篩４に払い出して篩い、網目を通過しない塊状物は可撓性板材２４と篩網との間を通過させる間に振動する可撓性板材２４の打撃により解砕して網目を通過させる。



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【特許請求の範囲】
【請求項１】砕石微粉末と安定材とを混合して粒状化する混合機を備え、該混合機の下位には所定内粒度の粒状物を篩分ける振動篩を備えると共に、該振動篩の排出側には振動篩の振動を利用して網目を通過しない塊状物に打撃を加えて解砕する打撃手段を備えたことを特徴とする砕石微粉末の混合選別装置。
【請求項２】前記打撃手段として、振動篩の排出側に可撓性板材の一端側を固着して他端側の自由端を篩網上に載せ掛け、網目を通過しない塊状物が可撓性板材と篩網との間を通過する間に振動する可撓性板材の打撃により解砕する構成としたことを特徴とする請求項１記載の砕石微粉末の混合選別装置。
【発明の詳細な説明】
【０００１】
【発明の属する技術分野】本発明は、採石場、砕石場または製砂場等にて砕石を洗浄する湿式処理を行い、その廃水処理プロセスから回収される砕石微粉末（脱水ケーキ）に生石灰や石化系安定材等を加えて撹拌混合して粒状化し、その強度を高めるとともに安定性を確保する砕石微粉末の混合選別装置に関する。
【０００２】
【従来の技術】採石場、砕石場または製砂場等では砕石を洗浄するなどの湿式処理をしてその廃水処理プロセスから多量の砕石微粉末が発生している。この砕石微粉末は粒径の極めて細かい砂質系の微粒子であって、雨水等により容易に泥状化してしまう性状のため、産業廃棄物として埋め立て処分されていた。
【０００３】ところで、このような性状を有する砕石微粉末の処理方法として、最近では、砕石微粉末に生石灰や石灰系安定材を適宜量添加し、混合機にて撹拌混合し状化して安定処理砕石微粉末を製造し、この安定処理砕石微粉末をクラッシャラン（岩石または玉石をクラッシャで割りっぱなしたままの砕石）または再生クラッシャランと混合すれば、水硬性複合路盤材として有効利用できることが判明している。そして、前記粒状化した安定処理砕石微粉末の品質は、粒度が５ｍｍ篩通過質量百分率９５％以上に適合することを要求している。
【０００４】
【発明が解決しようとする課題】しかしながら、混合機にて砕石微粉末と安定材を混合して安定処理砕石微粉末を製造すると、所定内粒度の粒状物に混じって、混合槽内壁に付着したものが排出直前に削り取られたりするなど大きな塊のままの塊状物が排出されることがある。この不要な塊状物は次工程の篩装置などで取り除かれることとなるが、取り除かれる量が多いと骨材資源の有効利用率が悪くなるという問題がある。
【０００５】本発明は上記の点に鑑み、簡単な装置構成で、砕石微粉末と安定材の混合と解砕選別とを行えて所定内粒度の粒状物を極力多く製造することのできる砕石

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微粉末の混合選別装置を提供することを課題とする。
【０００６】
【課題を解決するための手段】本発明は上記の課題を解決するために、請求項１記載の砕石微粉末の混合選別装置にあっては、砕石微粉末と安定材とを混合して粒状化する混合機を備え、該混合機の下位には所定内粒度の粒状物を篩分ける振動篩を備えると共に、該振動篩の排出側には振動篩の振動を利用して網目を通過しない塊状物に打撃を加えて解砕する打撃手段を備えたことを特徴としている。
【０００７】また、請求項２記載の砕石微粉末の混合選別装置にあっては、前記打撃手段として、振動篩の排出側に可撓性板材の一端側を固着して他端側の自由端を篩網上に載せ掛け、網目を通過しない塊状物が可撓性板材と篩網との間を通過する間に振動する可撓性板材の打撃により解砕する構成としたことを特徴としている。
【０００８】
【発明の実施の形態】本発明の請求項１記載の砕石微粉末の混合選別装置によれば、混合機内で砕石微粉末に生石灰や石灰系安定材等を適宜量添加して撹拌混合すると、砕石微粉末は安定材によって脱水されて次第に塊状となり、更に撹拌すると混合羽根によって解砕されてやがて粒状化していく。混合機にて所定時間混合後、混合物を下位の振動篩へ排出すると、混合物は振動篩の篩網に沿って流下する間に大半の所定粒度内の粒状物は篩網の網目を通過して選別されていく。そして、粒度の大きい塊状物は網目を通過することなく流下し、やがて打撃手段のところに到達すると、振動篩の振動に伴って振動する打撃手段によって衝撃を加えられて解砕され、細かく解砕されたものは網目を通過して落下し、解砕されずに残った塊状物や石礫等は所定粒度外の塊状物として選別除去される。
【０００９】このように、砕石微粉末と安定材を撹拌混合して粒状化処理する際にうまく解砕されずに大きな塊状のものが一緒に排出されても、振動篩にて打撃を加えながら篩うことによって所定粒度内の粒状物を極力多く選別回収することができる。
【００１０】また、本発明の請求項２記載の砕石微粉末の混合選別装置によれば、打撃手段として、振動篩の排出側に可撓性板材の一端側を固着して他端側の自由端を篩網上に載せ掛けたので、可撓性板材は振動篩の振動によって篩網を打撃するよう動いており、篩網を通過しない塊状物も可撓性板材の打撃によってある程度解砕されて所定内粒度の粒状物として選別回収される。この打撃手段は構成も簡単で、かつ安価であって効果的である。
【００１１】
【実施例】以下、本発明の実施例を図面に基づいて説明する。
【００１２】図中の１は砕石微粉末と安定材を加えて混合して粒状化する砕石微粉末の混合選別装置であって、

架台２上に砕石微粉末を造粒処理する混合機３を搭載し、該混合機３の下位に解砕選別する振動篩４を配設している。なお、図示していないが、混合機３の上位には砕石微粉末及び安定材の貯蔵、計量槽等を適宜配設する。

【００１３】前記混合機３としては、例えば、混合槽５に二本の平行な混合軸６、６´を貫通して混合槽５に固定した軸受７により回転自在に支持し、駆動用モータ８にて混合軸６、６´を図２の矢印で示す相反方向に回転させる二軸式混合機を採用する。前記混合軸６、６´にはアーム９、１０を放射状に配設すると共に、アーム９の先端には塊状物を擦り潰す作用を担う擦り潰し羽根１１を、またアーム１０の先端には混合槽５に付着した材料を掻き取る作用を担う掻き取り羽根１２を配設している。

【００１４】前記擦り潰し羽根１１は、混合槽５の内壁との隙間に擦り潰そうとする塊状物を噛み込んで内壁に強く押し付ける形状となっており、また、掻き取り羽根１２は、擦り潰し羽根１１によって擦り潰されて混合槽５の内壁に付着した材料を掻き取ると共に、掻き取った材料を混合軸６、６´の軸心方向に送り出せる形状となっており、この両羽根によって擦り潰し作用と掻き取り作用を何度も繰り返すことによって砕石微粉末を再利用可能な粒状物にしている。

【００１５】混合槽５の下部には排出口を開放・閉塞するゲート１３を備え、該ゲート１３はエアシリンダ１４にてスライドさせて適量づつ開閉して混合物を徐々に排出できるようにしている。また、混合槽５の下位には排出される混合物を振動篩４へと案内する案内ホッパ１５を配設している。なお、混合機３は上記のような構造の二軸式混合機に限定するものではなく、要は砕石微粉末と安定材とを混合して適当に造粒できるものであれば良い。

【００１６】振動篩４は、枠体１６に所定の網目を有する篩網１７を配設すると共に、適宜位置に振動モーター１８を取り付け、スプリング１９を介して混合槽５の下位に傾斜させて吊り下げている。そして、投入された混合物を振動させながら流下させる間に篩い、網目を通過した粒状物は案内シュート２０を介して搬送コンベヤ２１上に落下させて回収し、網目を通過しない塊状物はオーバーサイズ排出シュート２２を介して不要物として系外に排出するようにしている。なお、篩網１７の網目は必要に応じて適宜のサイズのものを採用すればよいが、例えば６ｍｍ程度のものを採用すれば路盤材として好適な粒状物が得られる。

【００１７】また、振動篩４の篩網１７の排出側には振動篩４の振動を利用して網目を通過しない塊状物に打撃を加えて細かく解砕するための打撃手段２３を配設している。この打撃手段２３としては、例えば図１、図３に示すような篩網１７と略同幅で適宜長さとしたゴム板等の可撓性板材２４を使用し、この一端側を枠体１６に掛け渡した支持部材２５に締結具にて固着し、他端側の自由端を篩網１７上に載せ掛ける。この可撓性板材２４は振動篩４の振動に伴って上下に振動して篩網１７上の塊状物を打撃解砕できるように、適宜重量のものを採用したり、或いはバネや重りを取り付けて適宜の打撃力を発揮できるようにしておく。このように打撃手段として可撓性板材２４を採用すれば構成が簡単で、かつ安価であり、また石礫等の解砕できないものを挟んでも支障がないので好都合である。

【００１８】しかして、混合選別装置１によって砕石微粉末と安定材を撹拌混合して安定処理砕石微粉末を製造するときは、先ず、図示しない砕石微粉末貯蔵槽より砕石微粉末を払い出して計量槽にて所定量計量すると共に、安定材貯蔵槽より安定材を払い出して計量槽にて所定量計量し、これら計量したものを混合槽５に投入して撹拌混合する。砕石微粉末は安定材と撹拌混合されると、脱水されながら次第に塊状物となり、この塊状物は擦り潰し羽根１１よる擦り潰しや掻き取り羽根１２による掻き取りを何度も繰り返し受けて細かく解砕されていき、やがて粒状化されていく。砕石微粉末が概ね粒状化されると混合槽５下部のゲート１３をエアシリンダ１４によって徐々に開放して適量ずつ振動篩４へと排出していく。

【００１９】振動篩４に投入された混合物は振動によって篩われながら流下していく間に大半のものは篩網１７の網目を通過して落下していく。網目を通過しない塊状物はそのまま篩網１７上を流下して打撃手段２３のところに到達する。

【００２０】塊状物が打撃手段２３である可撓性板材２４と篩網１７との隙間に入り込んでいくと、塊状物は振動によって上下に踊る可撓性板材２４によって打撃されて次第に解砕されていく。こうして、可撓性板２４を通過する間に解砕されて粒度の小さくなったものは篩網１７の網目を通過して落下し、案内シュート２０を介して搬送コンベヤ２１上へと排出されて回収される。また、所定粒度まで解砕されずに残った石礫等はオーバーサイズ排出シュート２２を介して不要物として系外に排出される。

【００２１】このように、上記砕石微粉末の混合選別装置１では、混合機３にて砕石微粉末と安定材とを混合解砕して粒状化処理した際に、うまく解砕されずに塊状のままのものが排出されても振動篩４に備えた打撃手段２３によって解砕して所定粒度内の粒状物を極力多く回収できる。

【００２２】

【発明の効果】以上のように本発明の請求項１記載の砕石微粉末の混合選別装置によれば、砕石微粉末と安定材とを混合して粒状化する混合機を備え、該混合機の下位には所定内粒度の粒状物を篩分ける振動篩を備えると共

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に、該振動篩の排出側には振動篩の振動を利用して網目を通過しない塊状物に打撃を加えて解砕する打撃手段を備えたので、簡単な装置構成で、砕石微粉末と安定材の混合と解砕選別とを行えて所定内粒度の粒状物を極力多く製造できる。

【００２３】また、請求項２記載の砕石微粉末の混合選別装置によれば、打撃手段として、振動篩の排出側に可撓性板材の一端側を固着して他端側の自由端を篩網上に載せ掛け、網目を通過しない塊状物が可撓性板材と篩網との間を通過する間に振動する可撓性板材の打撃により解砕する構成としたので、打撃手段として構成も簡単で、かつ安価であって効果的である。

【図面の簡単な説明】

【図１】本発明に係る砕石微粉末の混合選別装置の一実施例を示す概略図である。

【図２】図１の混合機の一部省略の縦断面図である。

【図３】図１の振動篩の斜視図である。

【符号の説明】

１…混合選別装置	３…混合機
４…振動篩	５…混合槽
１３…ゲート	１４…エアシリンダ
１５…案内ホッパ	１６…枠体
１７…篩網	１８…振動モーター
１９…スプリング	２０…案内シュート
２１…搬送コンベヤ排出シュート	２２…オーバーサイズ
２３…打撃手段	２４…可撓性板材
２５…支持部材	

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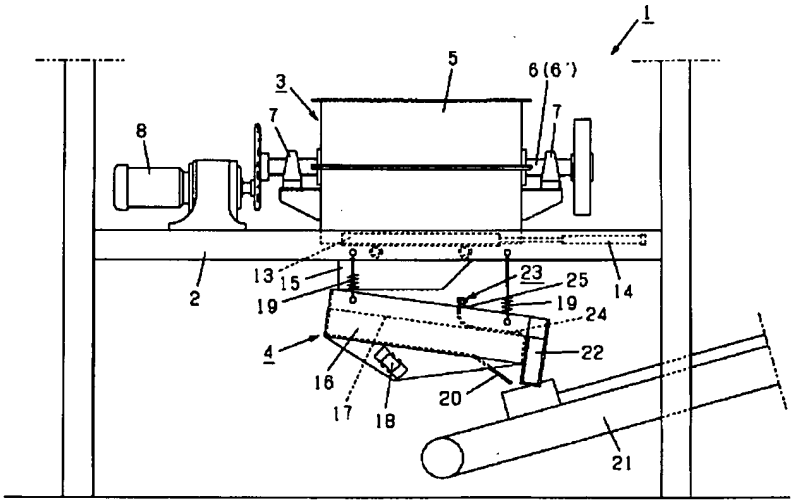
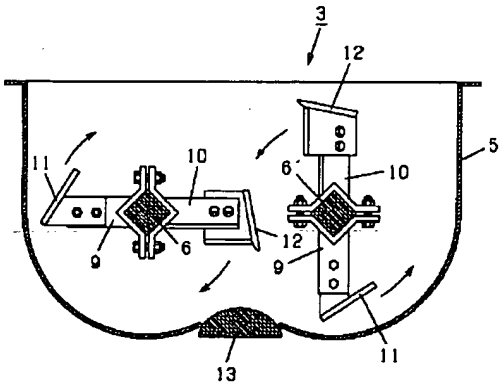
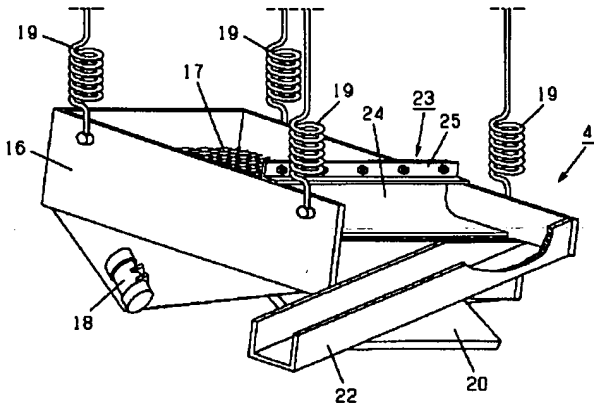
【図１】



【図２】



【図３】



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